American Cinematographer

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☆ THE MOTION PICTURE CAMERA MAGAZINE ☆

In This Issue

Telefilming Horse Races

October
1945

(No. 11 of a series on the manufacture of Du Pont Motion Picture Film)

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AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 26 OCTOBER, 1945 NO. 10

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ON THE FRONT COVER is a scene from "Never Say Goodbye," a Warner Bros production starring Errol Flynn At the camera is Director of Photograph, Arthur Edeson, A S C Photo by Mac Julian

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MAKERS OF 16MM EQUIPMENT SINCE 1923

REVIEW OF THE FILM NEWS

LOOK for both American and British film industries to start producing motion pictures in the German language soon It seems that at least a thousand important German film production personages, including many in the creative branches, have assembled in Vlotho to see what can be done about reviving German film production

With an eye to a future big money distribution field, British and American film company representatives are reported offering fat contracts to many of the Germans to leave Germany and work on German language films in London and Hollywood With most of the better German film creators already out of Germany, it looks as though German film production business will be hit its final blow if the remainder of its creative brains leaves for Hollywood and London But such a move would give British and Americans a lush future film market

Industrials by Majors

With Monogram studios leading the way with an industrial film, made for a group of Los Angeles clothing manufacturers, it is more than possible that major companies in Hollywood will soon be delving into the industrial field which is rapidly becoming a very lucrative spot Industrial made by Monogram is a 60-minute film on Kodachrome, and is in the nature of a lavish fashion show It was paid for, according to reports, by a group of sixty Los Angeles clothing manufacturers and is being shown to buyers and patrons of leading department stores

American Films in Netherlands

A strong contradiction of widespread rumors that American films have been banned in the Netherlands by a government decree, comes from Remer Urges of the Netherlands Association of Cinema Owners (Nederlandsche Bioscoop Bond). Mr. Urges declares that the royal decree issued by the Netherlands government in London in 1944 only made the importation of films into the country subject to government license However, this decree is now invalid and there are absolutely no restrictions upon the importation of American motion pictures The main drawback to a larger importation of American motion pictures has been the scarcity of foreign exchange, but large amounts now have been made available for the purchase of films abroad He also brought out the fact that the Ministry of Education, Arts and Sciences had announced that two royal decrees concerning the purge of the film industry of Nazi elements would be published shortly and that in the meantime no motion pictures will be made inside the Netherlands until the producers have been given a clean bill of health by the Film Purging Commission Adding a general survey of the Netherlands film industry, Mr Urges said that an additional complication has been the shortage of film materials which made it impossible for the industry to make sufficient copies for wider distribution

Independent Production

Of particular interest to free-lance cinematographers in recent news is a move toward decentralization of motion picture production, which bids fair to increase in coming boom post-war era It is revealed that 43 independent producers will make at least 75 of the feature pictures which will be released by major companies during the coming year This is exclusive of the group who release through United Artists With increased independent production there should be greater demand for top free-lance directors of photography

16mm Challenge

Judging from the news, America's theatres are going to face tremendous competition from the 16mm industry in the not too distant future In Hollywood alone there are at least a score of production companies that are planning big entertainment film programs for 16mm, and it is reliably reported that a number of groups are making efforts to line up 16mm circuits to reach the home projector owners. New 16mm producing companies are planning to make good pictures of highly entertaining type Major companies that now sell 16mm rights to their films do not release them for at least a year after they have played the theatres, and it is felt the new narrow gauge films planned will cut drastically into the majors' year old releases as well as make a dent in theatre grosses. Large number of army and navy cameramen who have been trained in use of 16mm cameras are also said to be planning to get into the new field

Raw Stock

Fear that increased shipments of raw stock to foreign countries might cut in on needed supply for American film companies were allayed by statement from Washington that control over raw stock exports will be retained, at least until the middle of October and maybe longer, by the War Production Board and the Foreign Economic Administration It had previously been announced that all controls would be lifted New move assures American film companies of all the raw stock they need Washington announcement said war-expanded facilities for raw stock production permit a maximum quarterly production of between 595 and 600 million linear feet

Television

From new York comes word of the establishment of a permanent television film unit by the American Broadcasting Company It is interesting to note that the company is employing only union cameramen, which indicates that television broadcasters realize that motion picture cameramen, with their years of practical experience, are what television needs. At start of television the engineers attempted to have cameras manned by engineers, but eventually have learned that the only substitute for a good cameraman is another good cameraman

New Trend

With the close of the war a new trend in production policy has come to the fore. New policy brings in movies relating to the problems of service men returning to post-war life in America. Practically every studio in Hollywood has one or more films of this nature either in production or preparation. Method in which various studios are treating the films dealing with readjustment and rehabilitation of the veterans varies from bitter dramatic indictments to light musicals and comedies —H H

ACES of the CAMERA

GLEN GANO
A. S. C.

By HAL HALL

GLEN GANO, A.S.C., has created more mechanical devices pertaining to the picture business that have eventually been patented by other people than any other man in the motion picture industry.

While Glen is a cinematographer by profession, he is a scientist at heart, and throughout his quarter of a century in the profession he has spent years in research, with results that have been of tremendous value to everybody but himself. And—he is not through with his research and inventiveness yet—we predict that one day before too long he will be heard from with another forward mechanical step in the photographic field, but this time Glen will become a business man for a change and will profit from his labors.

In 1917, during the first World War, a group of 65 men from the film studios, under the leadership of Lee Lawson of Universal Studios, went to Washington, D. C., where they formed one of the units of the camouflage division. For a time they were together as a part of the 40th Engineers. Glen didn't like being a soldier. He wanted to be transferred to some other outfit where he could use his knowledge as a cameraman. Not being able to make any headway toward a change by letter writing, he decided he would have to get to the proper people in Washington in person. So he arranged to be made a cook in his unit. As a cook he got every other day off, so he went to various governmental departments in Washington every other day seeking some means of being of better service in some department where his camera knowledge could be of value.

Finally, he succeeded in reaching Herbert E. Ives, distinguished scientist, who immediately requested that Glen be transferred to the Aviation Section of the Photographic Science and Research Department. Professor Robert A. Millikan headed this department. Among the scientists and physicists connected with the department were Ives, Dr. Duff, author of Duff's Physics, Dr. Merrill of the Mt. Wilson Observatory, Adolph Neitz of Eastman Kodak Research Laboratories, and many others.

What was needed was film fast enough to photograph camouflaged objects on the ground from airplanes flying at various altitudes. Glen worked in close collaboration with Ives and Dr. Duff. The others came in from time to time to check up on the progress being made in the developing of the fast film. Facilities for experimenting were unlimited, and Glen spent hours in the laboratory studying and working with Ives. A pilot would take Glen up each morning to make his photographic tests. The remainder of the day was spent in the laboratory. The final result was fast panchromatic film. This was for the government.

After two years in this experimental laboratory, Glen was instructed to compile all the data and formulae pertaining to panchromatic film. When that was done, his report was shipped to the Eastman Kodak Company laboratories in Rochester. At the end of 1919 Glen returned to Hollywood, brimming over with enthusiasm and new photographic ideas which he had learned in his two years of experimenting. Among these new ideas was the idea of shooting night shots in daylight. Glen hit upon this by accident.

He had sensitized some film in the laboratory and from the top of a hangar was some test shots. He had used the wrong combination of filters, so when the film was developed it appeared to have no image on it. He kept it going through the developer until highlights finally started to appear. Then full development brought out the picture which looked exactly as though it had been shot at night. He started at once to experiment with different filters and sensitizing solutions until he finally obtained the perfect effect. He put this into prac

(Continued on Page 348)

The Men Behind The Combat Cameramen

By Sgt. HERB A. LIGHTMAN

U S ARMY SIGNAL CORPS

WE first spoke of it on board ship during our recent voyage home from overseas A group of us, all combat motion picture cameramen of the 167th Signal Photo Co , were sitting up on deck talking over the year we had just spent filming the European war

We all agreed that the company had done well on its assigned tactical mission The mission had not been an easy one As official photographer for General Bradley's 12th Army Group, it had been our job to accompany front-line troops into action, to shoot under fire films for tactical analysis, as well as for newsreel release to troops overseas and to the folks back home

Our record spoke for itself The 167th had participated in four major battle campaigns, shot footage during a period of 250 consecutive combat days, and had been presented with the meritorious service award In addition there were numerous individual awards for valor

The photographic record, too, was impressive Combat units covered the smashing of the Siegfried Line, the storming of the fortress city of Metz, crossings of the Moselle, Roer, Sauer and Rhine rivers, and finally the link-up with the Russians

We talked about all these things as we watched the blue ocean glide by on our way back to the good old U S A We were trying to decide what factors had enabled our company and other Signal Corps photographic companies to follow through with the degree of efficiency and **esprit de corps** that had characterized the Army's photographic program in the European theatre of war

A leading factor was, of course, intelligent leadership Our commanding officer, Capt Merle H Chamberlin, and 1st Sgt Gene B Coogan (both of M G-M studios) had welded the company into a unit that took pride in its work as the photographic "eyes" of the Signal Corps We were a team—and we had good leaders

But there were other men behind us as we set out to do our wartime photographic job—men of the Research Council of the Academy of Motion Picture Arts and Sciences who had set up the mechanism for recruiting cameramen into the Army

Side-by-side with them were veteran top-notch cinematographers of the American Society of Cinematographers—men like John Arnold, Emery Huse, Alvin Wykoff, Joseph Ruttenberg and Karl Freund, who gave their time and energy to instruct these soldiers and teach them the "know-how" that a combat cameraman had to have.

Now that the war is over, I can tell in detail how hard these men worked to put competent cameramen on the fighting lines so that an overall picture of the war could be recorded and preserved on film.

As I look back now, I can say that my career as an Army cinematographer began in the offices of the Research Council of the Academy of Motion Picture Arts and Sciences way back in September, 1942. At that time the Army needed trained cameramen and needed them badly The Academy had accepted the challenging job of recruiting these cameramen for the Signal Corps

I recall now the various types of men who passed through the offices of the Academy to be first interviewed, then either accepted or rejected for the service

We were a mixed group Some of us who had come from the studios knew only **production** camera techniques and were used to having such aids as booms, dollies and fancy lights. We knew that off-the-cuff combat photography was a far cry from the sound stage

Others in the group were veteran newsreel cameramen used to on-the-spot coverage of fast action. But they, too, had to be trained the Army way

A third large group was composed of amateur cameramen eager to join up Some of these were indifferent hobbyists who looked on motion pictures as a now and-then time-killing pastime They were ruled out But others—serious, advanced amateurs who wanted more than anything else to make motion pictures—these had something to offer besides mere enthusiasm Many had been active in cinema clubs Some had made commercial, industrial and educational films as an avocation A good number had developed a very professional style of shooting a camera

It was the job of the Academy to interview each man personally and to determine if that man could be trained into the type of cameraman who would make good motion pictures under fire For we were told, then and there, that our mission would be **strictly combat.**

When the job of selecting the right men had been completed, the next step was to train these men in the fundamentals of combat cinematography, to give them all a common basis for carrying out the important task ahead This is where the men of the American Society of Cinematographers stepped in

First came four weeks of intensive training in photographic chemistry and physics under the tutelage of Emery Huse, A S C For the more advanced candidates this was valuable review For the less experienced it provided an indispensable fund of background knowledge For all of us it was four weeks of gruelling study and mental gymnastics.

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Above is Blakely's movie studio at the edge of his parking lot. Top left, Blakely at work in his midget studio. Lower center, Blakely again. Two drawings are characters he drew for his current production.

Hollywood's Smallest Studio

By HILDA BLACK

YOU'VE got to hand it to Gene Blakely, for the lad has patience, courage and drive to back up a terrific ambition. Cameraman, artist and "fellow-with-a-dream," Blakely operates a parking lot on Las Palmas, just south of Hollywood Boulevard.

But—between running cars back and forth on the lot, this lanky, likeable, Gary Cooper-ish looking young man bounces in and out of the attendant's hut where he has maintained, since March, 1941, what is probably the most unique and certainly the smallest, movie studio on record. It's only eight by five feet, and Blakely has to stoop a little to enter, but in this little studio in odd moments when he is not parking cars, he has created "Siegfried," a film that may set a new standard in entertainment for animated short subjects.

Using the old Scandinavian Saga of Siegfried and Brunhilde as the basis for his story, Blakely has done right nobly by those characters. Beautiful heroine Brunhide is his idea of Olive de Havilland. "Not so much in actual appearance," he explains, "but more as a character study. To me, Miss de Havilland is the personification of all the wonderful qualities the Norse maiden possessed."

For heroic Siegfried of Poetic Edda fame, he used himself as model, studying facial contours and proportions in the mirror. (I know another artist whose cartoon hero is patterned after himself: look closely at "Red Ryder" and you'll see his creator, Fred Harman.)

Blakely has drawn a Wotan, not terrible nor awe-inspiring, but more resembling a prankish Little King, three delectable Rhinemaidens with guile, seashell combs and Lana Turner curves, Mimi and Alberich, the peculiar gnome-like dwarfs who covet, not the Maidens, but their precious Rhinegold. And last, but by no means least, there is the villain of the piece, the evil dragon.

Only, he isn't too revolting, because even the villain is not entirely without redeeming grace, when he comes to life via artist Gene Blakely's brush.

"Perhaps having a small son of my own makes me acutely aware of one

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Top left, typical scene at Hollywood Park. Above is how the horses look to the cameramen in the towers. Lower left, one of the camera towers from which the races are filmed. Right, developing the film

Telefilming Horse Races

By NORMAN HARTFORD

As this article was being written eight days after opening of the Hollywood Park horse race meeting, no jockey had been accused of foul riding, or suspended. This unusually serene situation followed a wild series of rough riding complaints at the Del Mar track, just closed.

Critics claimed the sudden good behavior of the jockeys wasn't all a case of any saintly desire to reform. Instead, observers said it was induced by a motion picture innovation at the track called "Hollywood Park Telefilm Control."

Under this telefilm system, which cost the Park a small fortune to install and operate, 16mm telefilms are taken of every race from start to finish.

Cameramen are perched in six towers around the track, shoot "head on" footage of the action from the starting gate to the finish line, catching the horses as they round the turns and hit the straightaways. Jockeys are conscious that the camera eye is trained on them to record their every move—including any of the 1000 tricks in a jockey's bag.

When the race is over a man in a station wagon rounds the track, picking up film which slid down a wire from each tower. He rushes the film to a darkroom where it is hastily printed and dried (under a secret process claimed by the Telefilm studios) and is ready to be shown six minutes after the race on a six by eight foot screen in a miniature theatre if the board of stewards so desires. Any infraction of the rules will be plainly visible, it is claimed.

Joseph A. Thomas, Telefilm Studios president, takes a bow for devising the system and maintaining it in operation. Jack Mackenzie, Hollywood Park general manager, is accredited with having conceived the idea of enlisting Hollywood's movie brains in an effort to raise the standards of racing.

When his studio received the lucrative contract, Thomas rolled up his sleeves for a terrific task. Fortunately, he already had surrounded himself with top men of the industry. Several of his men had been Army and Navy cameramen, had worked under fire in Africa, Italy,

(Continued on Page 354)

The "Guzap" That Went To War

THE oft-repeated war-time cliche—"Such-and-such has gone to war," was more than just a threadbare alibi to account for the shortage of 16mm. motion picture cameras for civilian use. In fact, that monotonous refrain was the only proper way to express what had become of the Filmo 16mm. camera, produced since the early 20's by Bell & Howell Company, manufacturer of professional and amateur movie equipment, but soon to be available again.

The Filmo went to war as the "GSAP"—pronounced "guzap"—which is Air Force diminutive for "gun-sight aiming point camera," or,—"Camera, Gun, Type AN N6." And, as the guzap, it rode in the nose, wings or elsewhere on combat planes, recording the shooting exploits of combat pilots. When the guns start firing, the guzap jumps into action within an eighth of a second, showing where the bullets went, what havoc they wrought, and how the victim reacted. The reaction is recorded by the guzap, "on its own," as it were. Because it continues taking pictures for a pre-set one to five seconds after the firing has ceased.

The pilot does not have to be a photographer to operate the guzap. But he has to be a good gunner to bring back a prized roll of film showing a kill. He needs only to press his trigger—his gun trigger—to start the shooting of both bullets and pictures. Where the gun points, and fires, the guzap "looks" and records what transpires, actuated by an electric motor supplied with current from the plane's electrical system.

Many breath-taking sequences, some of which have reached the news reel screens, have been brought back from combat encounters by the guzap. The "pilot's eye-view" of enemy installations or equipment being shot up, of enemy planes disintegrating in mid-air, has been the product of this three-pound ever alert picture maker which, in its peace-time version, was so popular as a recorder of home movies for the amateur picture devotee.

In going into the fight aloft, the guzap version of the Filmo had to be fortified for conditions and rugged usage never encountered in the hands of the movie amateur, however. Temperatures, in all climates and at all altitudes, vibrations set up by aircraft power plants or aircraft guns; quick starting lest the battle to be recorded be over before the camera started functioning—these were but a few of the requirements or conditions Bell & Howell engineers had to work out with engineers of the Photographic Laboratory, Engineering Division, Wright Field.

Because the guzap had to function perfectly at extreme altitudes, while temperatures are encountered fit to freeze even a camera with only its lens sticking out of a plane wing or nose, a heater had to be provided. The guzap has its own electric heater, thermostatically controlled, right inside the camera case. The heater draws only two amperes, but assures operation at temperatures from sixty degrees below zero to one hundred and sixty-five above zero, Fahrenheit.

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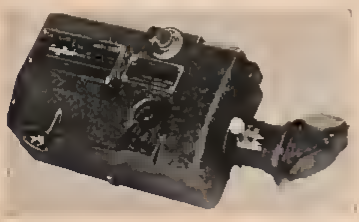
Above is view of a gun sight aiming point camera mounted in the nose of a P 38



Left is the Guzap. Right smoking enemy plane caught in line of fire of gun sight aiming point camera. Note how tracer bullets reveal path of bullets from plane.

A.S.C. AROUND THE WORLD

SEEING BERLIN—Here we see Captain Ted McCord A S C and Lt Col Crump, writer at Warner Brothers Studios in the heart of ruined Berlin They covered the fameus Big Three Meeting at Potsdam and in this scene they are about to make lasting film records of what our bombers did to Berlin A S C men were at every front during the war and played a big part in recording it on film for posterity Capt McCord is now out of the service and is back at Warners

Where They're Working

As this issue of the Cinematographer goes to press members of the A S C are photographing feature productions as follows

Columbia Studios

Rudy Mate—"Gilda" Charles Lawton —"Perilous Holiday" Phil Tannura—"Secret Story"

Metro-Goldwyn-Mayer

Joe Ruttenberg—"Adventure" Sidney Wagner—"The Postman Always Rings Twice" Robert Surtees—"Two Sisters from Boston" Charles Schoenbaum—"Bad Bascomb" Jack Smith—"Holiday in Mexico" George Folsey—"The Green Years" Hal Rosson—"No Leave, No Love" Karl Freund—"Time for Two" Len Smith—"The Fiesta"

Monogram

William Sickner—"Stepping Around" Harry Neumann—"Rollin' Along"

Paramount

Charles Lang—"Blue Skies" John Seitz—"Take This Woman" Lionel Lindon—"Monsieur Beaucaire"

P.R.C.

Ben Kline—"I Ring Doorbells" Marcel LePicard—"Caravan Trails"

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HORSLEY HONORED

M/Sgt. David S. Horsley has been presented the Legion of Merit by Colonel J K McDuffie, Commanding Officer of the 18th AAF Base Unit (Motion Picture Unit), Culver City, at a ceremony held at that installation.

Sgt Horsley was awarded the Legion of Merit for the performance of outstanding services during the period of September 1944, to March 1945, in connection with the invention and development of a secret device which materially added to the success of briefing B-29 crews for Jap operations

Formerly employed as a cameraman by Universal Pictures, Inc , Sgt Horsley is a member of the American Society of Cinematographers, International Photographers, and a past member of the Valley Radio Society

Sgt Horsley and his wife, Mrs. Alma V. Horsley, reside at 11304 Burbank Ave , North Hollywood, California

Left Colonel J K McDuffie Commanding Officer of the 18th AAF Base Unit (Motion Picture Unit), Culver City, California awards the Legion of Merit for exceptionally meritorious conduct in the performance of outstanding services to Master Sergeant David S Horsley Next to Sgt Horsley is Staff Sergeant Steffen L Hansen who received A r Medal for outstanding service in connection with photo missions over Japan

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your patience
your understanding
your friendly helpfulness
in our difficulties of
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THROUGH the EDITOR'S FINDER

THREE new members were added to the roster of the American Society of Cinematographers, and one other member who has been out of the A.S.C. for some time resumed membership, he is John Alton. The new members are Vincent Farrar, resident member, Nicolas Toporkoff of Paris, France, and Robert J. Sable of Chicago, Ill. They are non-resident members. We are also glad to welcome the return from the Armed Service of Ted McCord and Wilfrid M. Cline. Captain Henry Freulich, M.C., is also reported back in the States from the South Pacific, but still in service.

FILM Producer Jack L. Warner should be praised for his stand in regard to the making of motion pictures with economic themes in the post-war era.

"Post-war film makers should not hesitate to concern themselves with such problems as economic stability, full employment and the stamping out of intolerance," says Mr. Warner. He explains that his company has made so-called war pictures because "I felt that a motion picture art which failed to concern itself with the impact upon the individual of the greatest military conflict in history would be a very sterile medium indeed."

Mr. Warner adds, "When the atomic bomb hit Hiroshima, every man, woman and child in the country became aware of their personal stake in the maintenance of peace. And when an airplane plant or a shipyard closes down, the subject of unemployment becomes of vital interest to the men and women who are out of work. I doubt that motion pictures can neglect these themes."

Right, Mr. Warner. Films have passed the custard pie stage. They have become a vital factor in our everyday lives. They should not hesitate to deal with the problems that are paramount in our lives.

INTERESTING, indeed, is the statement that aerial photography as an aid to policing Germany and Japan should become an integral part of our plan in those countries, made by Sherman M. Fairchild of the Fairchild Camera and Instrument Corp., New York.

"Air photos were responsible for 90 per cent of our military intelligence in World War II, and it is more than logical we continue to use photography to assist our occupation of the conquered countries," Fairchild said.

In his opinion, regular photographic observation of occupied areas can determine whether the Japs and Germans are fully living up to terms of surrender in the reconstruction period. The photographs, when studied by Army and Navy photo-interpreters, whom Fairchild said had proved to be "America's secret agents No. 1," can thwart any attempts of the citizens in the conquered countries to "go underground" or "pull funny tricks."

Fairchild, an outstanding authority on aerial photography, added that no comprehensive planning for rebuilding bombed and shelled areas can be done by merely walking through the ruins. Instead, aerial photographs can be used as a map for sensible, economical reconstruction.

"Both the Army and Navy have thousands of aerial cameras at their disposal," he said, "and this equipment should be as fully used as an instrument of peace as it was a weapon of war."

To accomplish this task, Fairchild feels an overall Army-Navy organization be set up for the purpose, with full cooperation from the occupied countries.

Fairchild said aerial photography has already successfully been used as a health measure, too, aiding in malarial control in certain Pacific areas wrested from the Japs. Study of photomaps, supplementing sketchy ground surveys, paved the way to proper drainage and cutting of malaria-producing brush areas. Through this method, modern medical science has been able to eliminate malaria in many sections, notably in Guadalcanal.

Certainly, photography is becoming a more and more important factor in our lives.

PRACTICALLY the only big business that has not and does not spend vast sums in telling the world what it has done in helping the war effort is the motion picture industry. The aircraft industry, automotive and rubber industries, railroads and countless other industries have spent untold thousands of dollars for paid advertisements in every conceivable type of publication telling their part in the war. But the motion picture industry has continued to go quietly along, doing a terrific part in helping win the war but saying nothing about it.

Perhaps no industry in the world has done so much to keep up the morale of the men in the service as has the film industry. To every far-flung fighting front went actors and actresses from Hollywood to bring cheer and entertainment to our troops. When morale was low at some given spot the war department merely asked the film industry for help, and away would go the greatest film stars in the world to entertain the men and bring their morale up to standard. Practically every member of the film entertainment field was pledged to go wherever he or she was needed—and they went.

But of still greater importance, perhaps, was the contribution of motion pictures to the men in the services. Francis Harmon, War Activities Committee chairman for the film industry, has just reported that the motion picture industry gave films on 16mm stock to the armed services totalling a value of $38,500,000. This represents 43,306 prints of feature films and 33,326 prints of short subjects. These were not old films—they were the newest films made in Hollywood. In some cases films were released to the men in the service before they were shown in America in the film theatres. And—these films were GIVEN by the industry. The airplane and automobile manufacturers sold what they made for the government—and yet they bought page after page of space in magazines and newspapers to tell about their contribution, which they had a perfect right to do. But, the film industry said nothing—just served.

Approximately 150,000,000 feet of 16mm raw stock was used in making up the industry's gift to the services, which started a few weeks after Pearl Harbor. One-third was contributed by Eastman Kodak and the photo products division of DuPont. The balance was paid for by donor companies, and the processing laboratories waived all profits. It is time the world should be told of the service of the film industry in winning the war . . . Perhaps members of Congress, always eager to pick on the motion picture industry and condemn it, might come up with red faces if someone should read into the congressional record the story of the magnificent job the film industry did during the war . . . and for free.

ONCE again we harp on the subject of giving directors of photography more credit on the screen and just simply CREDIT in the advertising of entertainment motion pictures. To the best of this writer's knowledge the only production head who gives advertising credit to a director of photography is Hal Wallis who releases through Paramount.

As we have said many times before, one of the most vital and important elements in the making of a good motion picture is the photography. Without photography we would have no picture. No matter how great the ability of a director, if his cinematographer cannot get the proper mood in his lighting that director's job will be injured. No matter how great the ability of an actor, his performance is hurt by bad angles and poor lighting. No matter what the mood desired by the writer, it is lost if the cameraman doesn't do his job properly. The director of photography is one of the key individuals in the making of a film, so why shouldn't he be given equal billing with the other key figures?

"Carbon arc lamps give excellent light quality and quantity, and control."

William V. Skall, A.S.C.

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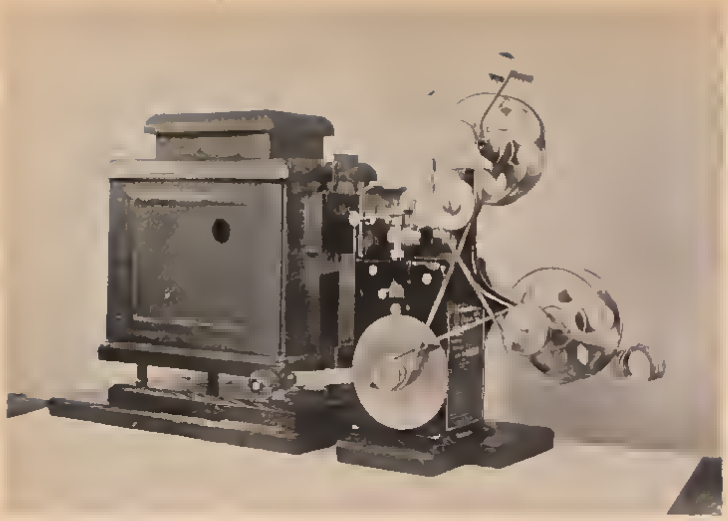

Figure 1

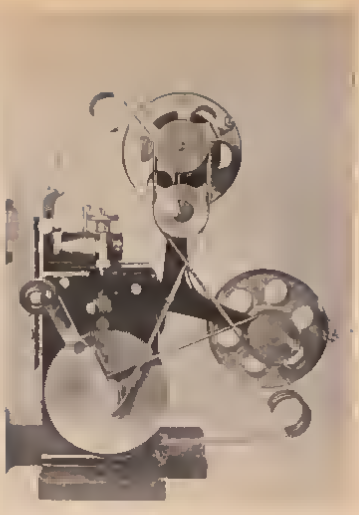

Figure 2

Home Movies Projector Era Of 1912

By R. REES LUMLEY

WITH the introduction of 8 and 16mm films, cameras and projectors the "Home Movie" has been made popular and practical The thousands of films available for rent or purchase, the never ending flow of gadgets of every description, new this, new that, make the home movie fan quite able to do most anything he may desire

There was an era of home movies, however, which was not so fortunate as to have much assortment of equipment; no cameras, no gadgets. It did have a selection of films from the short, crudely made, "nickelodeon" pictures

This era was during the time of the "Edison Home Kinetoscope" which was placed on the market about 1912. (Fig 1) This little projector has two features, at least, which are found on theatre projectors today, the safety fire shutter and Geneva Cross intermittent

The mechanism is simple and quite modern in its makeup (Fig 2) The continuous belt system, metal reels, rewind crank on upper reel shaft, even the reel arm position and shape is suggestive of its having been copied by modern projector designers In Fig 3 there is more evidence that there is "nothing new under the sun", the door type gate, the intermittent teeth below the aperture, the recessed film track and the flat spring tensioned gate Note the three apertures

The projection lens is positioned permanently to the top of the main casting and by means of a rack and pinion shift (Fig 4) the intermittent movement, gate, and reel arms can be moved side-

(Continued on Page 350)

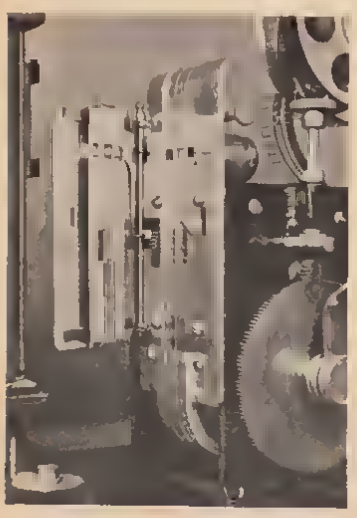

Figure 3

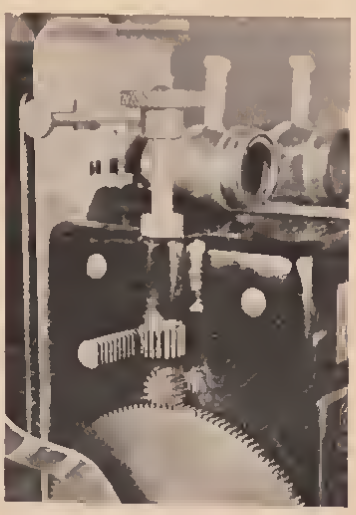

Figure 4

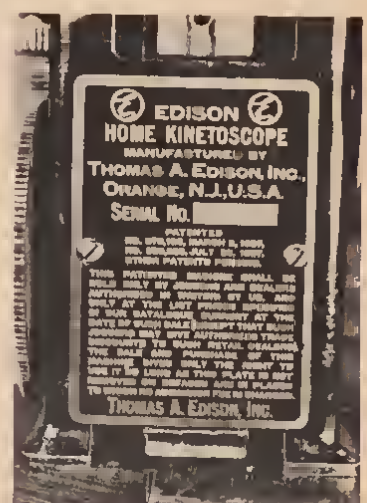

Figure 5

THE FILM'S THE THING!

THE million details of production—from script and casting to the final take—have only one purpose: to flash a particular pattern onto a ribbon of film.

It's the film itself that must *make* the picture. When all is done, the film *is* the picture.

A good reason for choosing Ansco Supreme Negative.

For this outstanding film has the ability to make the *most* of everything it sees through the lens

Its smooth gradation, fine grain and high resolving power, in competent hands, permit negatives of unsurpassed quality—negatives which will yield beautiful release prints.

Try Ansco Supreme Negative. Convince yourself of its superiority.

KEEP YOUR EYE ON ANSCO — FIRST WITH THE FINEST

The Production of Scientific Films for Biological and Medical Purposes

(On 16mm Film Stock)

By J. YULE BOGUE, Ph.D., M.R.C.V.S.

(Continued from Last Month)

Slow motion following normal motion should always be used where very rapid changes are involved, but only where you want the nature of the change to be demonstrated, such as the movements of the wing in flight, the sequence of events in the contracting heart, the break down of tissues under stress and so on. It is also desirable when demonstrating a surgical technique where rapid movement is essential

Animation and superimposed outlines are also valuable, but this technique should only be used when it is not possible to portray clearly your effects by other photographic means. Animation is a great help in many films, and in some is essential It must be done really well Most of the animations we see create a ludicrous atmosphere due to poor animation technique. The animation must be smooth as possible, and great care must be taken with the outline registration There is nothing more irritating than a figure which squirms and shimmies on the screen. Whether the drawings be animated or static, they should be left until all the living shots have been made One reason for this being that the drawing should not be too stylized, it should be a much simplified though faithful representation of the subject. The general form of the outlines should be based on enlarged frames of the actual film, or from stills taken at the time of filming. In the case of static outlines, to assist the audience in orientation, the outline must be made from one of the actual frames of the sequence Instead of having a drawing preceding or following an actual scene, it is preferable to superimpose the outline over the actual scene and to fade it in or out as required. Diagrams and animation should, of course, be fully noted in the script

At this stage we come up against a delicate point. I believe that in the type of film we are making (remember the film is not making any new contribution to knowledge), we should send copies of the completed script to colleagues in the same field in order to get their constructive criticism I see no reason why this should not be done, after all, these are the people who will be using our films Two, or possibly three, outside people are all that are necessary In the case of a sound film, this often results in the improvement in the commentary But do not send the film script to a large committee; they often cannot differentiate between commentary and camera instructions and insist in altering grammar in both because they feel they must do something.

In the case of films for export, we must, I think, use a small panel of experts, as the film must give a balanced statement of the scientific progress and generally accepted opinions of the country of origin I do not consider this essential when the purpose of the film is to demonstrate a particular technique or discovery associated with a living worker who has taken part in the production. If the person concerned has not taken part in the production, then he should be consulted at every stage and his approval of the final result obtained It is far better that criticism should be levelled at the script stage, before any of the shots have been made, than when the film is completed, as it may be impossible to effect the necessary amendments

When the final version of the script has been completed and approved, the means of recording must be studied in detail In biological and medical subjects many of the phenomena are likely to be unrepeatable, in most cases half a dozen retakes cannot be made on the same subject In many cases where a retake is necessary the unit may have to wait for another case or a new subject to enable them to replace their unsatisfactory shots, and to repeat a longer sequence in order to obtain case unity In the case of surgical films the camera man must go and watch the type of surgical procedure he is going to record and examine the surroundings in which he is to work Operations cannot be held up for the camera, though in some cases there may be a fair amount of latitude The camera must not get in the way of the surgeon, nor, of course, must the surgeon's hand or head obscure the field In other words, the surgeon and camera must work as a team, each must anticipate the other's movements The camera has to be fitted into the routine of the operating theatre and must not constitute a hazard. If the camera can operate from an overhead framework, so much the better. Here, the camera, camera-man and lighting can be separated from the subject by sterile cloths draped over the structure, apertures being left for the lens and lights, and a transparent window sewn into the cloth for direct observation

It is usually necessary to make two complete takes of any surgical procedure. The first is useful as a trial and is instructive, the camera-man can alter his lighting, fields and angles; the surgeon, the position of his hands, and so on The camera must never endanger the success of the operation.

In the case of experimental procedures there is more freedom, the camera can take liberties and the experiment must be so organized that it assists the camera The ideal case, in which camera consideration come first, is not by any means always possible. The experiment may have to be carried out in a certain laboratory possessing the facilities peculiar to the work, but it may have many disadvantages from the viewpoint of the camera The laboratory may be too small in area or lacking in height; glass cupboards may have to be draped There is always some serious snag to be overcome if the experiment cannot be set up in a room adaptable to studio requirements. Camera-men may be discouraged by the environment in which they have to work There is, however, one consolation in laboratory work, it is rarely necessary to include an area greater than two square feet In going over some of my own films I have noted that, with the exception of three, the area has never been greater than one and a half square feet, usually much less Even so, the range is enormous; it may be anything from 0.1 mm square, with an object of study only a few thousandths of a millimetre long, to about 0.2 of a square meter.

Some laboratories may have a floor pit, working in this, with the preparation a few inches above floor level, gives the camera and lighting greater freedom in laboratories of small size Whenever possible, more than one camera should be used, preferably with rapidly interchangeable magazines or some speedy method of reloading of the order of ten to fifteen seconds. As some of the phenomena may take a fair time and must be fully recorded, an electric drive on one camera is essential It is most irritating to have to rewind towards the end of a shot because it runs, say, sixty instead of forty feet. Though careful editing and cutting may do much to retrieve the loss, it cannot introduce an intermediate stage which has been missed.

A battery of lenses is very pleasant to have, but most of the work can be done with a one-inch f/1.9 and a two-inch f/2.9 with drawtube focusing, a longer focus lens about four inches with wide aperture is also desirable Visual focusing is essential, as is also a corrected optical viewfinder. It should be possible to view the exact field during the whole take. Kinemicrography is made easier by using suitable optical equipment for viewing the field while the exposures are being made. When a microscopist is viewing a field, such as a blood smear containing parasites, he continually alters the focus in order to study detail This should also be done when the field is being filmed, it shows up more detail and converts what would

(Continued on Page 346)

Note: The article by Dr Bogue is printed through the courtesy of the Photographic Journal, official organ of the Royal Photographic Society of Great Britain —The Editor

"PROFESSIONAL JUNIOR"*

Removable Head Tripods

FRICTION TYPE

Now Available Without Priorities—The Finest Tripod Made—The "Professional Junior"

The friction type head is removable, fits the Standard all metal Baby and 'Hi-Hat' low base adaptor. Unsurpassed versatility.

The 'Professional Junior' tripod affords rock-steady, super-smooth 360° pan and 80° tilt action. Top-plate takes all 35mm and 16mm camera even with motors and large film magazines. Compact yet provides camera height usage from 72" high to 42" low. Weighs 14½ lbs. Has all refinements: large knurled knobs and wing-nuts for tension and locking adjustments. Positive acting leg-locking knobs simplify handling. Extra sized trunnion for long, dependable service. Tripod head is unconditionally guaranteed 5 years.

'Professional Junior' tripods, collapsible dollys, 'Hi-Hats', shift-over alignment gauges are used by the U. S. Navy, Army Air Bases, Signal Corps, Office of Strategic Services and other Government Agencies—also by leading Newsreel Companies, 16mm and 35mm motion picture producers.

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* [illegible] U. S. Mark Reg. U. S. Pat. Office

AMONG THE MOVIE CLUBS

St. Louis Club

The Amateur Motion Picture Club of St Louis this past summer changed its policy from that of other years In the past the club has held no meetings during the summer months, but this year it was decided to hold meetings each month, with a happy result.

One meeting took the form of a picnic at which the members photographed the various games and other events These pictures will be shown at an early fall meeting. Another meeting was scheduled for the night the surrender of Japan was announced, and instead of parading the streets 45 members showed up at the meeting where the following films were shown

"It's West Again," 8mm, by Werner Henze

"Christmas Spirit," 16mm, by James Bialson

"Ginger," 8mm, by Ryne Zimmerman of the Milwaukee Club

"Honeymoon is Over," 8mm, by Lon Wadman.

La Casa Club

Three 35mm one 16mm and one 8mm films made up the program at the September meeting of the La Casa Movie Club of Alhambra, California The following films were screened

"High Sierras Vacation,' 8mm, by D M Gardner.

"Yosemite in the Spring," 35mm, by R B Vail

"Canadian Rockies," 35 mm, by Elva M Walker.

"Travelogs," 16mm, by John Cook

"Mexico, 1945,' 35mm, by Guy Nelli

L. A. 8mm Club

"Thunderheads Over the Pacific," a 16mm sound film in color, highlighted the September 11th meeting of the Los Angeles 8mm Club. The film was made in 1941 by Captain Darrel Brady, and shows the islands of the South Pacific before the war. The late President F D Roosevelt requested Captain Brady to screen this film for him in person

On September 28th the club members held a picnic at Mineral Wells in Griffith Park

New York Eight

Two outstanding 8mm films highlighted the September meeting of the New York Eight Millimeter Club They were the Maxim Award Winner, "In His Own Judgment," by Joe Harley, and "Sunstruck," by George Mesaros The latter film received honorable mention in the list of 1945 amateur films.

M. M. P. C.

The Metropolitan Motion Picture Club of New York City opened its current season with an excellent program on the evening of September 20th, at Hotel Pennsylvania Following are the events.

"A Day at the Zoo," 16mm Kodachrome by Walter Bergmann.

"Mount Ranier," 16mm Kodachrome, by Frank Gunnell

"Elementary Introduction to Light and Color," a 15-minute illustrated lecture by J R Hefele This is the first of a series of technicolor lectures scheduled for the year

"Russian Easter," 16mm Kodachrome, by George Serebrykoff

San Francisco Club

The Cinema Club of San Francisco held its September meeting in the Defender's Room of the Women's City Club. The following program was presented:

Display and demonstration of the latest Eastman 16mm silent projector

A black-and-white 16mm Orientation film

Kodachrome slides of Sequoia National Park, Rainbow Bridge and some desert scenes, by Lewis N. Rice.

Kodachrome slides of Crater Lake, by Leon Gagne

Chicago Club

More than 200 amateur movie enthusiasts attended the gala opening night in the new quarters of the Chicago Cinema Club on the evening of September 6th Feature of the evening was the screening of a 2,000-foot 16mm travel film made by Willa T Doubson The film covered China, Japan and the Philippines before the war, and made a great hit.

At the September 20th meeting Leon F Urbain presented his unusual color film, "Springtime in California," and for the climax of the meeting he presented "Wedding of Flowers," a unique color slide program synchronized to music and representing the courtship and marriage of various flowers.

Westwood Movie Club

Inasmuch as this issue of the Cinematographer will be on the press before the Fourth Annual Amateur Movie Makers Exposition is held on September 28th under the auspices of the Westwood Movie Club of San Francisco, we cannot report on the event at this time We do hope to give a detailed account of the affair in our next issue.—The Editor

The Cameraman

By ISA L. WRIGHT

WE sing our ringing praise of picture queens;
We laud him high—our hero of the screens;
We even credit him who writes the scenes
For picture fan.
But who, in numbering the ones of worth
That bring us picture gleams of joy or mirth,
Remembers that there even lives on earth,
The camera man?

Nay, no Adonis he, nor fair of face,
Nor hath he idol's charm of winning grace;
The ladies do not worship him in space,
Nor buy him flowers
They do not send him eggs with pinky bows,
To get an interview with him, nobody goes;
No magazine his poseful picture shows
For musing hours.

But he's the man behind the things that be,
From pole to pole he scrambles desperately;
And though he's not a raving sight to see
In lime-light glare,
There's nothing that he does not dare to do,
There's nothing that he doesn't make come through,
In fire, and flood, ear'hquake and warring, too,
He's always there

Mayhap, some time, since humble service brings
A sprouting impetus to mortal's wings,
Untrammeled by the taint of earthly things,
He'll flit away,
And tripping lightly through the night of stars,
He'll let down all those high celestial bars,
Stealing an eight reel wonder play of Mars,
And win the day

War [illegible] are Off— U. S. Navy Photographs

"Making news into history" is an everyday job of Kodak's Recordak System

YOUR STANDARD SIZE NEWSPAPER compressed to postage stamp size on enduring microfilm instead of newsprint that yellows and crumbles with the years . . . Newspapers all over the country are having it done every day

Because news is the stuff that history is made of.

These newspapers as they are published are sent to the Recordak Laboratories. By means of the ingenious Newspaper Recordak incorporating the superb Kodak Micro-File Ektar lens, they are automatically photographed down on Recordak Micro-File 35-mm film—in a matter of seconds

The master negative film goes to Kodak's fireproof air conditioned film vault—today's time capsule. The individual newspaper orders positive films—or prints—for its own files and for other subscribers. Thousands of these go to public and university libraries

Three little rolls of film carry every word and picture America's biggest newspaper prints in a month with a saving in space of 98%

To look up a story the film covering the correct week or month is inserted in the Recordak Film Reader. Pages are flipped through at the touch of a finger. There brilliantly projected on the screen—40% larger than the original paper—is the date the page your story—easier to read than the day it came off the press

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EASTMAN KODAK COMPANY
ROCHESTER 4, N. Y.

Serving human progress through photography

Production of Scientific Films for Biological and Medical Purposes

(Continued from Page 342)

otherwise be a lantern slide into an active demonstration. Camera makers instruct you to hold the camera steady. This is wrong. It should never be held at all; always use a tripod, rigid stand or optical bench according to the nature of the work. Frictionally controlled movements are not very satisfactory; gyroheads or well greased gear-driven mechanism being preferable. In the latter case, make sure that all backlash has been taken up. Optical bench slides, tracking rails and so on should be smooth.

All biological subjects are sensitive to heat, we may want much light, but it is of no use if we have too much heat. By trial and error I have found that a maximum of four photofloods, No. 1 type, and four 500-watt incandescent lamps at two and three feet respectively is about all that living organisms will tolerate without change for longer than sixty seconds. Even this will produce drying effects on exposed organs in less than two minutes. These lights are all housed in matt reflectors. All exposed tissues should be covered with warm saline pads until shooting actually begins, and should be re-covered between shots. Ideal lighting for small area close work is two, or possibly three, projector bulbs in cooled housings fitted with detachable heat filters and focusing attachments. These are mounted on cross arms attached to the tripod head, the lights being made to converge on the area to be photographed. The camera and lighting in this case are moved as one.

The use of mirrors in order to get light into awkward fields is of assistance in certain types of close work, and since this type of work usually involves exposed organs, it is desirable to know something about the reflecting properties of the mirrors. Both heat and light are, of course, reflected, and in the mirrors which are likely to be used there is a tendency for the longer wavelengths to be reflected rather more than the shorter. Since it is possible, in some cases, that we are working on the limit of heat tolerance, this factor might be significant. It is of interest to compare the percentages of normal incident light reflected from three surfaces which might be used. The surfaces are silver, rhodium and aluminum. The following figures can be found in any suitable reference book.

Wavelength in Å U	Percentage of normal incident light reflected		
	Silver	Rhodium	Aluminum
2 500			80
3 000	< 30	78	90
6 000	86	79	90
8 000	94	81	85
10 000	94	83	90
12 000	94	85	85
White light	80 (approx.)	80 (approx.)	88

Recent developments in the deposition of aluminum on glass would seem to indicate the use of an aluminum mirror in preference to the other surfaces, since the heat and light are reflected in about equal proportions.

The camera distance at which most work is done varies between four feet and eighteen inches, with the lighting between two and three feet away unless lamps are available which can be flooded and spotted. The average aperture lies between f/5.6 and f/8.0 at normal taking speeds using Kodachrome A.

It might be mentioned here that, if necessary, sterility of the atmosphere may be obtained by using U.V. lamps before shooting begins. The intensity required is about fifty to sixty micro watts per square centimeter.

With regard to choice of film stock, I find reversal most satisfactory for black and white, especially Super X or Super XX. I prefer, however, to use Kodachrome and make the black and white dupes from it; the quality is excellent. We are, of course, in the hands of the processing department. We should have a precision processing service at our disposal, of the Offenhauser type. Some try to get all their stock of the same emulsion number and then send it off to be processed at the same time. Under controlled conditions this is correct, but under present conditions there does not seem to be much advantage, though it is good practice. When the film has been processed, get the dupe made at once, and do all the work on this. Do not touch the original.

There is one additional practice which is useful. When the script has been completed and broken down into shots, put each shot to be taken on an index card — six inches by four inches — together with full instructions and a grid in which is recorded the stop, lighting, camera distance, frames per second and shot number. When the card is completed transfer it to the editing file. The shooting file gives one the opportunity of making certain types of continuity shots on preparations which are being made for other purposes, e.g., the preparation of an ating for cannulation.

A few words on the actual procedure of taking the shots. Camera loaded, spare magazines nearby, leaders run off, lighting tested, spare bulbs, carbons and films at hand, distances checked. The minimum team required, apart from those concerned with the scientific demonstration itself, consists of a man for each camera, a protocol writer and an assistant to operate the lights. Mock runs of the complete take are then made, three or more may be necessary. The demonstrator must be made to do all his movements deliberately. Never include more of the demonstrator than necessary, the hands or even the finger tips are all that may appear, and even these should be out of the field whenever possible. Keep the attention riveted on the part demonstrated. All instruments which the demonstrator may require should be placed in a convenient position so as to avoid fumbling, but they should be out of the field. When these rehearsals are at last satisfactory, do a final rapid check up, especially on focus and stop. The various settings should be called out individually and checked off on the protocol card. In experimental work all runs much more smoothly if the demonstrator is also the director, otherwise number one camera man, or, of course, a proper director. The take is then numbered in the usual way, and shot. The word "cut" should only be ordered by the demonstrator; it does not matter what appears to have gone wrong. While this statement is obvious in ordinary practice, it is of special significance in biological work, since, when something does go wrong, it may result in an unexpected reaction or effect being demonstrated which might be very difficult to produce to order. This should therefore be recorded and put aside for use in some future film.

Cutting and editing, as is known, can make or break a film. This is really a matter of experience. The film should move with a steady tempo and should, in its final form, be a complete lesson. It should be on the short side. The maximum length for a scientific film is, in my opinion, twenty-five minutes; the ideal length being between ten and fifteen minutes. This statement should be qualified if the film demonstrates (a) a technique, and (b) the results obtained by means of this technique. Then two reels of about fifteen minutes each are quite permissible. In other words, films should not be used to replace a lecturer, but to be part of his discourse.

Diagrams and animation should be made at the editing stage, taking the precautions already mentioned. If the diagram involves the tracing out or indication of a pump or other type of circuit, then this must be done slowly and deliberately, the pointer should not be waved about for emphasis. When the indication is finished, the diagram should be allowed to remain for a few feet so that it can be absorbed, the same applies before indication. Animation is better than a pointer. Where complicated apparatus or systems are involved, a diagram is essential. Here it is often useful to send out lantern slides with the film. This saves footage and also gives the lecturer ample time to describe particular points and to give the audience some idea of what to expect at important stages. For students the film should also be used in conjunction with their textbooks. They should have been instructed to read up the text concerned and a preliminary lecture should be given at the time of the presentation of the film. In order to assist the teacher, booklets should be sent out with the film. They should contain a brief introduction describing the film and a short description of each shot together with references to authors and scientific papers. These references

(Continued on Page 351)

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The growing acceptance and use of microfilm and motion pictures as an integral part of modern business is one of the most important developments of our day. And the processing of such film offers the Houston owner an insured and a profitable business future.

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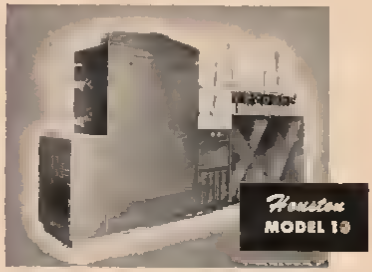

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THIS LITTLE EYEFUL is Linda Stirling under contract to Republic Pictures as a featured player. Photo by Roman Freulich.

Aces of the Camera

(Continued from Page 331)

tical use in his first film made after he returned to Hollywood—that was the first of a series of Strongheart films. Two or three years later another man made public claim to having perfected the idea, but Gano didn't even bother to refute his claims, although he has the original picture he made with the date it was made on it. That's typical of Gano. He doesn't go around seeking credit.

For several months after his return from the army he went from studio to studio seeking work. No one seemed to think that he had made himself more valuable by his two years of experimental work. Each studio executive would merely say: "What pictures have you photographed during the last six months?"

"I've been in the army for the last two years," he replied.

"Sorry," came the answer.

Finally he got a break at Mack Sennett's studio. He worked on Sennett's comedies, then Hal Roach's Vanity Fair Girls and on Universal serials. Then he met Larry Trimble. Trimble had been in England where he heard of the development of a new film that was more sensitive to the colors of the spectrum and would produce clearer and better pictures. He was looking for someone who had some understanding of this development. A friend told him to see Gano, which he did.

Trimble and Jane Murfin were planning a series of pictures starring the dog, Strongheart. Beautiful outdoor scenery was to be the background for the stories. Trimble wanted top photographic results. He hired Glen, who had worked in Washington on the first part of the fast film development. Glen at once ordered 50,000 feet of the new film from Eastman. Imagine his dismay when he was informed the film was not yet ready to be placed on the market. Glen knew how to sensitize the film, but had no equipment. So he set to work and built the necessary machinery, and made it portable, too. The company went to the mountains and the famous picture, "The Silent Call," was started.

Then came the question of developing the negative. This needed special handling in the dark. The timing had to be precise, and other details had to be considered, with which the laboratories until then never had to be concerned. Glen faced a lot of opposition from those who were opposed to anything new. So he very quietly developed his negative himself. He says he had an able young assistant; a boy who after school would work in the laboratory with Glen at night, counting off the seconds in the dark by tapping on a tin can. That young assistant is now one of Columbia Studio's most able and best liked executives—he is Duncan Cassell.

Trimble and Miss Murfin needed a release for their film, so when the first three reels had been completed they showed them to executives of the old First National Pictures Company and secured the release, as a super feature. A new man took over the management of the production company and shooting was resumed on the picture. This new manager, Glen says, didn't know anything about laboratory work, and didn't intend to let a mere cameraman tell him what should be done. So, when Glen left word that the negative he shipped in from location was not to be developed until he returned the manager ordered it all developed immediately. When the filming was ended and Glen returned to Hollywood he found that every foot of it, except his first three reels, had been completely ruined in development. Trimble knew it wasn't Glen's fault, so he and Glen left on location again. For two weeks they shot. They shipped their negative secretly to another laboratory where it was held. Then when Glen returned he developed it himself. It was perfect, and started the great Strongheart series which was so popular. This first picture was in 1921. After making a number of Strongheart films, the firm dissolved.

Glen then went with Thomas Ince. While with him Margaret Livingston would have no other cameraman but Glen. He did all the specials for all the Ince pictures, too. Glen had been studying color for years, and had worked out a process, and Ince and he started plans for a color laboratory. Glen was constructing his color camera, and equipment was being assembled for the laboratory. The color plans were in the

last stages of completion when Ince sent Glen to Canada to make special shots on a film, "Enticement," featuring Mary Astor and Ian Keith. While on location, Glen read of the sudden death of Ince. His dreams of color vanished. But later he discovered that another individual who had talked with him about color had secured patents on many of Glen's ideas—but the patents never did the man any good. Glen's color was called Spectrocolor.

Gano had loaned a friend $2000 to buy out a lighting equipment manufacturing concern. When he returned from Canada he found the man had the concern going great guns. The company was called Creco. Pete Mole was the studio contact man and Elmer Richardson the shop superintendent. Glen decided to spend some time in research on lighting, and wrote a number of articles pointing out that eventually incandescent lights would be used to excellent advantage. His ideas proved true. Eventually, Mole and Richardson pulled out of the company, which then became of little use, and the thriving new firm of Mole-Richardson came into being.

Right after that Glen met a man who had a peculiar mesh screen which he showed Glen. When treated with certain chemicals, this screen produced unusual effects on a stage when light was flashed on it. This gave Glen an idea in connection with stereoscopic projection. Universal Studios provided the projector, Glen had the camera and the mesh screen. On November 18, 1927, a demonstration of Glen's idea was given at the Ebell Club. That evening the late Carl Laemmle's niece was making her debut on the stage as a dancer. Part of her dance was a scene in which she appeared to be dancing in flames. As she danced the projection machine threw the impression of the fire (in color) on the mesh screen which was hanging in front of the dancer. The effect was so perfect that the audience didn't know it was a combination of film, screen and a human person. Glen says he can't be exactly certain, but he believes from what information he has at hand that his system has been incorporated by Russian film scientists into the new system of stereoptican projection announced recently from Moscow.

Glen later got back into color experiment again, always with a monopack idea. The depression had hit America about that time, and Glen couldn't raise the money he needed. So his plans didn't mature.

Meanwhile he has continued being an excellent cinematographer, as well as one of the best liked members of the American Society of Cinematographers. Some day, we predict, one of his ideas will click for HIM. He has a number of them in the hatching process. And he is now determined to become a business man as well as inventor.

The "Guzap" That Went to War

(Continued from Page 335)

Vibrations not encountered in the hands of even the most nervous or palsied amateur taking pictures with the peace time Filmo had to be considered, and the guzap proved able to function in spite of the turbulence set up by adjacent machine guns spewing out bullets at the rate of many hundred per minute. The standard inspection test for the "overrun control" mechanism, for instance, calls for three minutes of vibration at a frequency of "2,200 cycles per minute and an amplitude of one thirty-second of an inch." That's buzzing!

The quick-starting requirements, demanding that the guzap be operating full tilt before the first bullet had gotten many yards away from the gun muzzle, required some new concepts of mechanical alertness. Machine guns are fired in short bursts. Five seconds of continuing firing represents a respectable salvo. So, the 24 volt motor which actuates the shutter and the film advance was called on to reach maximum speed in the length of time, at sixteen frames per second, required for two frames to be exposed. This adds up to the eighth of a second previously mentioned.

Another requirement had to do with "effective distance." Without detailing the shorter ranges, it is enough to say that acceptance tests include try-out of the camera at 1,500 yards. Amateurs conversant with 16mm camera use can appreciate the obstacles to satisfy results at such distances—just a few hundred feet short of a mile!

The guzap operates at speeds of sixteen, thirty two or sixty four frames per second. It is a magazine loader and has an amber filter which screens out much of the objectionable, picture-fogging ultra-violet light encountered at high altitudes. The filter also protects the fine lens.

In addition to producing combat records, the guzap has been used extensively in gunnery training. In showing a pilot's mistakes as well as his accomplishments, it has served to improve marksmanship. Its use by flying branches of the armed services had produced a pictorial record of successful combat tactics never before available.

Henning and Cheadle Form New Film Company

A new firm, Henning and Cheadle formed to handle films and film programs for training and promotional purposes, is announced by the two owners, Lester A. Henning and George R. Cheadle.

The new firm, located in the Book Building, Detroit, Michigan, will prepare and produce motion pictures, slide-films and printed literature, and coordinate these media into complete programs.

(Photo by Arthur L. Allen. Last picture of all 1 [illegible])

"I had qualms when I shot this picture — youngster and white horse in sunlight, black horse in shadow, and I wanted *full detail on both*."

Whether you're after a tough one like this, a routine shot, or a color picture, you can *make sure of correct exposure* with a G-E meter. Easy to use, accurate, sensitive, and dependable.

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GENERAL ELECTRIC

HEART OF THE FLYING FLASH CAMERA

Here for the first time is a photo of the repeating flash tube device which played a leading role in the defeat of Germany, Italy and Japan

The device, called the General Electric (repeating) Flash Tube, is being fashioned in the Lamp Development Laboratory of G E's Nela Park, Cleveland It is shown here with the popular No 5 mighty midget photoflash bulb

With machine-gun-like rapidity, the unique flash tube shoots brilliant "bolts of lightning" earthward from reconnaissance planes equipped with special electronic auxiliary equipment The device permits the taking of countless night aerial photographs from altitudes up to two miles, swift reconnaissance of enemy territory, and the recording of nocturnal troop movements and similar vital information

The G E repeating flash tube consists mainly of four elements a coil tube, a special gas; two electrodes, and, mounting The five-turn coil is made of finger-thick quartz tubing The powerful flash-producing arc travels between the electrodes through an atmosphere of gas The tube's mounting includes a base equipped with terminal posts, a handle, and a cylindrical protective jacket (three inches in diameter and open at the bottom) of pyrex glass

Included among the numerous uses sighted for the flash tube after the war are applications for lighthouses and in airway beacons

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Now Florez, Inc.

Reflecting the expanding scope of its postwar services for business and industry, Visual Training Corporation of Detroit has announced adoption of a new name, Florez, Inc.

To accommodate clients' increasing demands for more diversified services in the fields of training, market development and promotion the company has realigned its executive personnel Genaro A. Florez, founder of the Visual Training Corporation, continues as president and chairman of the board of directors

Home Movie Projector Era of 1912

(Continued from Page 340)

ways as a unit for positioning any one of the three rows of pictures behind the lens To show a complete reel the projector is cranked forward in normal manner with one outside row of pictures behind the lens, then when the end of the film is reached a shift over is made to position the center row or pictures behind the lens The projector is cranked backwards to show this row of pictures, which rewinds the film to the start of the roll Another shift is then made to align the other outside row of pictures behind the lens and the projector cranked forward again in normal manner. The film would then be rewound to the top reel by the crank on the upper reel shaft. Pretty slick. There are no upper or lower feed sprockets but in their place are two guides or fingers, equipped with light springs, which maintain large loops or slack in the film between the gate and the reels These guides dampen out the intermittent jerks on the film and are constantly letting out and taking up this slack

The name plate on the front of the mechanism is interesting (Fig. 5) Mustn't charge admission but maybe six old buttons would be all right

The film used with the Edison Home Kinetoscope has three rows of pictures and two of perforations The picture image on this film is very near the present 8mm in size I have seen only two lengths of film rolls (Fig. 6) the longer being about 75 feet, and the smaller about 35 They are just rolls of film on a wooden core, as the reels are always a part of the projector and one side of the reel is removable to allow of placing the film roll on the real shaft.

The films which I have seen had real "box office" appeal in their titles, for instance, "Fathers Dress Suit" and "Amateur William Tell" or maybe you would rather see "The Capture of the Burglar" These three particular pictures were copyrighted in 1911 by Thomas A Edison, Inc, Orange, N J. According to Eastman Kodak Co authorities, this film stock was first supplied in June, 1911, slit and perforated by the Edison people and was called No. 1 Positive Film. It has a cellulose nitrate base but with a so called non-inflammable overcoating which materially reduced the fire hazard The records not being available, it is quite possible that Edison later changed from N- 1 film to Safety Film

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Captain Pope Named

Capt Loverne A Pope has been appointed director of photography for the U S Navy bureau of aeronautics. He replaces Capt Robert S Quackenbush, Jr, assigned to sea duty

Production of Scientific Films for Biological and Medical Purposes

(Continued from Page 346)

should be listed at the end of the booklet as is done in a scientific publication.

An ordinary film is so made that it is unnecessary to repeat anything and this is also the case in the majority of scientific films. There are however some cases in which a recapitulation is desirable. This is likely to be the case when a complete technique is demonstrated for instructional purposes. Here the completed demonstration is followed by a brief run over the various precautions or special points brought out in the film. An excellent example of this can be seen in the recent film on ether anaesthesia.

We might include here the use of film loops, whereby a particular sequence is repeated over and over again. The recently completed Technicolor film on the movements of the tongue in speech is so made that it can be broken down into a series of loops thereby placing at our disposal a new technique in presenting speech to the eye. The series of movements and sounds accompanying them are presented to the subject over and over again. In the case of deaf mutes with a small amount of residual hearing the signal from the sound track can be amplified and fed into earphones thereby giving each patient a hearing aid.

There are specialized fields in which the professional film unit is at a loss and where the filming is best done by the members of the laboratory. In some cases the whole film may be of this nature, in others it may be that such special work forms only a part of the finished production. Here the film camera forms part of the scientific equipment, and it is obvious that the research worker, performing the experiments with the help of his technical assistants, is the person best qualified to carry out this type of work. Even here it is obvious that, technically good though the films may be, they can often be given a final polish by the utilization of professional servicing under scientific direction, e.g., titling or effects which might be added by means of an optical printer.

Examples of such specialized films are—"The Microscopical Observations of Living Tissue," by Ebert, Florey and Sanders, and by the X-ray kinematographic films by Ivy and Little, Russel Reynolds, Barclay and Janker.

It is not possible to become an expert in all techniques, therefore it is desirable to get the help of the best experts in each field and work together. If this is not done, not only will the results be poor, but there may be danger, as would be the case in X-ray work.

It is unfortunate that 16mm sound and projection facilities are poor, especially the former. Further, owing to the mobility of 16mm equipment, the lecture theatres and rooms which are used for screening are, in many cases, far from ideal. Every effort should be made to ensure good projection and presentation. None of the audience should be nearer than twice the screen width, and the farthest not more than ten times screen width, with a maximum angle of 30° for viewing. Sheets with fold creases, yellow walls, roller screens torn at the roller junction, distemper on warped plywood, and even sheets of blotting paper, all of which I have experienced, do not constitute screens. It is also difficult to give a good showing when shafts of sunlight fall on the screen as the result of billowing blinds.

Century Ties With G. E.

Century Projector Corporation has recently entered into contracts with the Western Electric Export Corporation, a subsidiary of the Western Electric Co. for the exclusive representation of Century projectors, accessories and replacement parts, in all countries of the World with the exception of Canada and the United States. In Canada these products are distributed by the Dominion Sound Equipments, Ltd. and in the United States by Independent Theatre Supply Dealers.

Actina Expands

Mr. Erich Schuler, president of Actina, Inc., of 205 East 42nd Street, New York City, exporters of reproduction and photographic equipment and supplies, announces the appointment of Mr. John Wiederkehr as vice-president.

Mr. Wiederkehr was formerly sales manager of Campbell & Co., of Newton, N. J. Before the war put a stop to imports into the United States, he was the exclusive American distributor of various Swiss products used in the photographic industry.

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$2,000 Polaroid Filter Contest Announced

A $2000 Polaroid Filter Contest for a pair of pictures of the same scene, one taken with a polarizing filter over the camera lens and the other taken with no filter, has been announced for photographers throughout the country.

Prizes will go to contestants who photograph subjects that best demonstrate the usefulness of Polaroid light-polarizing filters in photography. Picture pairs entered in the contest should show how undesirable lighting effects such as window reflections, washed-out skies and sunlight reflected from a water surface are corrected by the Polaroid filter.

There are duplicate prizes for color and black-and-white entries. A first prize of $500 will be awarded the contestant who submits the outstanding color pair and another $500 first prize will be awarded the contestant who submits the outstanding black-and-white pair. In addition to these two first prizes, there are two $150 second prizes, two $75 third prizes, two $50 fourth prizes, and two $25 fifth prizes and two sets of ten runner-up prizes of $10 each.

Sponsored by Polaroid Corporation, Cambridge, Mass., the contest is to be judged by a board of newspaper and magazine editors and photographers. They are Fritz Goro, science photographer, *Life*, Philippe Halsman, president, Society of Magazine Photographers, Inc., Robert Shellaby, science writer, *Christian Science Monitor*, Augustus Wolfman, editor, *National Photographic Dealer*, David O. Woodbury, contributing science editor, *Collier's*.

The decision of the judges will be based primarily on the degree of improvement evident in the photograph taken through the Polaroid filter and on pictorial interest and composition.

Particularly effective are scenes including either pale white clouds against a light blue sky, a lake or pond with sunglare glancing off its surface, a highway, table top or other non-metallic surface obscured by a film of glare light, or store merchandise hidden from view by annoying reflections on the showcase window. A combination of two or more of these subjects in the same scene enhances the eligibility of the entry for one of the large cash prizes.

Contest entry blanks are to be distributed through photo supply stores. Both amateur and professional photographers are eligible to compete in the contest. There is no limit to the number of entries any one contestant may submit. However, a contestant can receive no more than one cash prize.

All entries should be postmarked not later than midnight, November 15, and addressed to the Polaroid Filter Contest, Cambridge 39, Mass.

Coronet Announces New Catalog of Instructional Films

A new catalog of approximately fifty 16mm sound motion pictures for classroom and other group instruction has been announced by Coronet Instructional Films. One of the most unusual features of this new film catalog is that the majority of the films listed have been produced in Kodachrome and prints are available either in full natural color or black and white. Another unusual feature is that the catalog, itself, is attractively and appropriately illustrated with full color "stills" from the motion pictures.

The various groups of motion pictures announced in the new catalog include the Biological Sciences, Civics, Economics, Psychology, Health, Industry, Physical Education, the Physical Sciences, and Social Studies, and Vocational Guidance.

Outstanding among the films in color are five on the American Indians of the Southwest, three on life in Mexico, nine on colorful birds of the United States, and an unusual picture showing the growth of flowers. The physical education series includes films on basketball, field events, swimming, tumbling and volleyball. One of the more advanced films for psychology classes has the imposing title, "Color Categorizing Behavior of Rhesus Monkeys," although the majority of the films listed are for use in elementary and secondary schools.

The new catalog, "Coronet Instructional Films," is available free to those who use 16mm sound motion pictures for training purposes. Requests for it should be addressed to Coronet Instructional Films, Glenview, Illinois.

New Filmosound Library Releases Announced

TOP MAN (Universal)
No. 2563—8 reels

When father retreads his way to the wars, teen-age junior becomes "top man," as the family carries on. His growing recognition and execution of his responsibilities, in school and elsewhere, is shown interestingly, and his leadership takes his student body into local war plant for part time work. (Donald O'Connor, Peggy Ryan, Richard Dix, Lillian Gish.)

SWISS FAMILY ROBINSON
No. 3320—8 reels

Film follows book closely. Shipwreck in tidal wave, rescue on tropic isle. Robinson Crusoe life on family scale, amusing and thrilling adventures. (Thos. Mitchell, Edna Best, Freddie Bartholomew.)

BIRDS OF THE BARRIER
No. 5843—10 min.

Nesting sea birds by the million. Life history, from egg to adulthood.

E. A. Petrtyl

Ampro Corporation has announced the appointment of E. A. Petrtyl, formerly assistant general manager of Motion Picture Engineering Corporation of Chicago, to a post in which he takes charge of Ampro's public relations and office management. He brings to Ampro a vast knowledge of office and sales procedure.

Where They're Working

(Continued from Page 336)

R K-O.

Gregg Toland—"The Kid from Brooklyn" (Samuel Goldwyn). Joe Valentine—"Hear 'beat." Karl Struss—"Tarzan and the Leopard Woman." Nick Musuraca—"Some Must Watch." George Barnes—"From this Day Forward." Frank Redman—"The Bamboo Blonde." Robert De Grasse—"Badman's Territory."

Republic

Tony Gaudio—"Concerto."

20th Century-Fox

Charles Clarke—"Smoky." Norbert Brodine—"Sentimental Journey." Ernest Palmer—"Centennial Summer." Joe MacDonald—"Precinct 33."

Universal

Milton Krasner—"Scarlet Street." Edward Cronjager—"Canyon Passage." Hal Mohr—"Because of Him." Elwood Bredell—"Tangier." George Robinson—"House of Dracula."

Warner Bros.

Peverell Marley—"Night and Day." Arthur Edeson—"Never Say Goodbye." Carl Guthrie—"Her Kind of Man." Ernie Haller—"The Verdict."

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Correct Exposure Important

Resolution falls off at high and low exposure values, reaching a maximum at some intermediate exposure at which the resolving power figure is selected. The loss of resolution with over and underexposure is an important reason for exposing miniature negatives correctly.

Contrast

A negative which tends toward underexposure is lower in contrast as well as lower in density than a fully exposed negative. A negative which is greatly overexposed is also lower than normal in contrast but of high density.

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Telefilming Races

(Continued from Page 334)

Germany and the South Pacific, and would not become flustered by a mere horse race. Some of them were veteran A.S.C. men long recognized as "tops." If any crew was ready with personnel and equipment to give service this was.

In their first test they amazed Hollywood officials by shooting a race and projecting it on the screen in 8 minutes. They cut this figure to 6 minutes and in several trials proved that they could maintain that speed in regular operation.

The camera crew consists of Brydon Baker, chief of staff, Floyd D. Crosby, Elmer G. Dyer, A.S.C., Leonard T. Galezio, John Stevens, Jr., Albert Wetzel, A.S.C., and Frank Blackwell. Lab men are Howard Jeffries and John Fitzsimmons and projectionist is John J. Hill.

The entire film world has taken a keen interest in the work at the track. Metro-Goldwyn-Mayer sent their newsreel cameraman Norman Alley, to the course to shoot the modus operandi. Many Hollywood camera and lab men, producers, directors, and actors, forget their sizable wagers on the bangtails long enough to take a professional interest and rubberneck at the telefilm boys in action.

Horse race followers see in the telefilm system not a mere experiment but a sound idea that will be adopted at tracks throughout the world, and one which will create a permanent visual record of all races.

Heretofore judges and fans have had to rely on binoculars to determine to the best of their visual ability whether there was "dirty work at the crossroads" among riders on the back stretch, far turn or coming down the straightaway. Now they have an accurate way of checking and the jockeys seem to realize it. At least, such would seem to be the logical conclusion after the first several days of racing at Hollywood Park.

Film Review of Bee Picture From Moscow, U.S.S.R.

Filming "Sunny Tribe" required infinite persistence and patience, and it was well worth it. For this short educational produced by the Military Technical Film Studio and now showing on Moscow screens is a fascinating supplement to the numerous books and treatises that have been written on the life of the bee.

Everybody knows—more or less—how bees make honey. In "Sunny Tribe" audiences actually see it being done. The camera eye shows a large cluster of bees building a hive. In a close-up a bee flies up to the top of the cluster. Then with legs and jaws it works wax scales on its abdomen into the requisite shape. Finally the comb is finished.

Warrior-bees mount guard at the entrance to the hive. We see them pounce on a wasp who has come to steal some honey. After a brief engagement the enemy is left prone and lifeless at the foot of the tree.

A sultry summer day brings another danger—the oppressive heat threatens to melt the hive and wipe out the fruit of long and painstaking labor. But the population of the hive mobilizes to stave off the danger. No sooner has the hive begun to trickle than hundreds of worker-bees rise to hover all around it and beat their wings to create a breeze.

One of the most interesting moments is the return of the queen bee after mating. She goes from cell to cell laying eggs—several thousand of them a day. Following her everywhere are worker-bees who clean up and feed her the purest honey in the world.

The cameramen who filmed "Sunny Tribe" spent long weeks and months at the hollow of the tree where the bees built their hive, patiently waiting for the shots they needed. Besides studying the bees they had to accustom them to their presence. When they were stung they had to take it just as patiently. There were times when a cameraman had to lurk motionless for days on end to give the bees a chance to forget him and go about their business as usual.

The most eventful part of the film is the second half in which a new generation appears in the hive. Following their own secret laws, the young queen and the old queen engage in a mortal duel, for both cannot reign. The queen who had just been supreme is killed and cast out. Then comes the turn of the drones, who are done away with as soon as they are no longer needed.

We see the new generation swarm off to build a new home. First scouts are sent out. They find a sunny meadow abounding in flowers. With the scouts pointing the way, the new generation rushes out to set up for itself.

"Sunny Tribe" shows how a man has studied the life of the bee and by influencing it increases the usefulness of these insects to human society.

Director of this film is A. Vinnitsky, Soviet specialist on educationals about insects.

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The Men Behind the Combat Camera

(Continued from Page 332)

Mr Huse was a fine instructor—keen, understanding, and with an unexcelled knowledge of his subject. If some of us wondered at the time why we had to dwell on these technicalities we found out as soon as we got into combat.

Over there we ran into all sorts of technical problems, and there was no time to sit down with paper and pencil to work out equations. It was the training we had under Mr. Huse that enabled us instinctively to make the correct technical decisions. Working at top speed with the ground erupting all around us we still managed to get pictures of quality on the screen. It was the background of our classes in photographic theory that made these responses automatic.

Next, we went into four weeks of camera work under John Arnold, A.S.C. Mr. Arnold, for many years head of the camera department at M-G-M, was the logical man to supervise this phase of the course. He knew all there is to know about cameras—all the little tricks that made a difference in technique, all the time-tried principles of camera handling.

We used to marvel at the speed with which he could thread a Mitchell camera. We found out later how vital this little knack could be. Our combat cameras held a scant 100 ft. of film. When the going got rough it was often the loss or gain of seconds in reloading our cameras that determined whether we would get our story or lose it.

There was drill and more drill in setting up cameras, tearing them down, making the numerous mechanical adjustments—until all of this become second nature. Mr. Arnold was satisfied with nothing less than perfection—we were glad of that later on.

Joseph Ruttenberg, A.S.C., and Karl Freund, A.S.C., both Academy award cinematographers, helped us in many ways, giving freely of their time and vast experience to teach us the things you could otherwise learn only through years of working with cameras.

They taught us the short cuts: how to save time without sacrificing the quality of the picture, how to work fast and sure with that camera, how to care for our equipment.

All of us who had worked with cameras professionally felt, for instance, that we knew how to clean and service lenses—but when Karl Freund showed us a new way to clean a lens we listened and learned because we remembered his superb camerawork in films like "The Good Earth" and we knew that he had put these principles into practice.

Similarly, when Joseph Ruttenberg lectured on light and exposure we paid attention because we had seen the sure technique of his work in M-G-M pictures and we knew that that smooth, crisp photographic quality had won him two Academy awards.

When we started shooting practice stories on the back lot at M-G-M a new factor entered into our training—pictorial continuity. Here Alvin Wykoff, A.S.C., stepped in to give us the benefit of his experience. As a top-flight cameraman who had worked for many years with the best directors, Mr. Wykoff knew whereof he spoke.

"Your shots, no matter how well executed, will have no meaning unless they tie together into a clear continuity pattern," he told us.

Continuity was the hardest thing for the class to learn. A man might know his camera technique thoroughly, but unless his scenes made sense when put together on the screen, all of his careful camerawork would have no value.

The class worked hard under Mr. Wykoff learning this phase. We shot complete stories in four scenes (a 100 ft. roll of film can accommodate only four to six good scenes, and if we could get a complete story on one roll, so much the better).

We learned how to select angles and image size so as to put emphasis into our stories, to give them "approach," to provide connecting links between scenes. This paid off at the front. There we could not control the action to suit our cameras, but the principles of continuity had become so deeply ingrained that we instinctively shot pictures that "made sense" on the screen.

We went overseas—our company and other Army and Marine Corps photographic units trained in these same Hollywood studio classrooms and by the same capable instructors. The record speaks for itself. The combat newsreels we put on the nation's screens, the tactical films which helped our field commanders to plan future campaigns, the documentary and training films we shot at the front to orient our fellow soldiers—all of these, I can safely say, had their start back in Hollywood.

The war is over now. Every man who did his part toward this end has a right to consider this his victory. The combat cameraman knows how much pictures have meant in this war. But the men of the Academy and A.S.C. who trained him, also have a right to rejoice in the knowledge of a job well done, for it was they who were, in effect, the men behind the combat cameraman.

Studio For Three-Dimensional Film Set Up in U.S.S.R., Report

A studio for three-dimensional films that will be the first of its kind in the U.S.S.R. has just been set up in Moscow. In a press interview studio director A. N. Andriyevsky, author of the first experimental stereoscopic films declared:

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Hollywood's Smallest Studio

(Continued from Page 333)

fact, but I honestly believe that too many cartoons are more grotesque than they need be," says he "I would like to give entertainment to children without scaring them to death in the meantime Also, I try to inject a certain amount of humanness into all of my characters I think they should be at least half-way normal and appealing"

And appealing they certainly are The dragon even has a sense of humor, I understand And another thing—Blakely has given them eight fingers and two thumbs—even as you and I. That's two more than other cartoonists allow their characters

Actually, Blakely first thought of doing "Siegfried" as a children's book That was in 1942. He was told that the story was too unfamiliar to children and would be more successful as an adults' book So he redesigned it along those lines, only to have publishers tell him that, with the government restrictions on paper and colors, they couldn't consider the book unless he eliminated much of the color That he refused to do, being of the opinion that without color, most of the effectiveness of the drawings would be lost So he discarded the idea of "Siegfried" as a book and hit on the idea of making it into a cartoon short subject

As a matter of fact, it is not the first cartoon film Blakely has made, but it is the first that will be seen Unfortunately, after he had worked for over two years on a film using "Willie Whipple" as the central figure against a Yosemite background, an accident to the film scratched it so badly that it could not be salvaged And worse luck, in his effort to keep expenses down, its producer had only one negative. He learned a lesson on that—and now figures the cost of duplicates small enough insurance on two years creative endeavors

He's philosophical about the loss, though "It was a stinker," he admits "I had made the mistake of writing the script myself—and I discovered right there that I'm a better cartoonist than I am writer From here on in, I intend to stick to well-known stories for my plots, and then I know I can't go wrong"

As to what those stories for future series might be, Blakely has some definite ideas Operas that are in public domain offer a great variety for cartoons and lend themselves to his type of work, so would other Viking stories and King Arthur Tales He feels that a series such as he plans could be readily adapted to theatrical release for short subjects or even feature stories, or for use as educational pictures in class-room instruction (a pet idea of his), or certainly for musical interpretation for use in schools and elsewhere

Right now he's endeavoring to get a studio release, with that he can get all the backing he needs to carry on Several important "name" people in Hollywood have seen his work and think very highly of it, and some have offered to help him make a good connection. Also, the fact that "Siegfried" will soon be televised by Don Lee has Blakely doing nip-ups!

So far as we have been able to discover, nothing like this film has ever before appeared on the screen It combines opera, travelogue and cartoon with music and commentary, and runs about 9 minutes The story of Siegfried's adventures is related by colored cartoon paintings which lap dissolve with real life scenes photographed by Blakely at Yosemite Among other things he caught on film is a terrific storm high up in the mountains, with blinding streaks of lightning and a raging torrent where a peaceful stream had been. Just the right background for the sequence where the treasure-thieving dwarfs steal the Rhinegold These and other drawings will be superimposed over the storm.

Above the music, at intervals, the narrator's voice will be heard telling the Saga of Siegfried. Gayne Whitney will do the commentating, and Blakely is hopeful of getting Stokowski's permission to use his recording of Wagner's "Siegfried" music. With that in mind he has already fit the characters to the music, rather than fitting music to the characters, as is usually done

Blakely does all his work with a simple magazine loading Filmo 121 16mm camera The quality of his films is so good they can be enlarged to 35mm film and shown in regular movie theaters But to those familiar with his background, his present success in getting excellent results is no accident

And he isn't a novice, either, for he received his first motion picture camera when he was nine years old as a gift from his father Dr C L Blakely Gene's father, is a well-known physician and surgeon at Baker, Oregon, where Gene was born It proved a good hobby for the boy who took an active interest in camera work from the beginning

He used to entertain the neighborhood kids in his backyard where he had rigged up an old phonograph machine with turn-table, by recording their voices while he shot motion picture film Then, by some ingenuity known only to the very young, he performed a feat of Edison with bits of copper wiring, string and various other odds and ends, with the result that he was making "talkies" fully two years before we had them on the screen

About the same time, he made his first commercial sale. Together with another boy, he went on a fishing trip, with of course, the inevitable camera Fishing is real sport in Eastern Oregon, and when Gene went out in a rowboat to try his luck, his buddy stood watch on shore and

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ready to follow Gene's directions, which were—keep on filming the action no matter what happened! And plenty happened! The powerful sturgeon proved almost too much for the boy and for a bad few minutes it looked like he would be carried down-river with the big fish. He yelled frantically for help, but his friend stood his ground and kept right on getting that action on film!

Afterward Blakely was grateful, for he sent it to Eastman Kodak and made his first commercial sale. Subsequently he sold many things to Eastman, among them Indian Ceremonial dances taken at Glacier Park and National Boy Scout activities there. In 1930 he was on hand at a Pendleton, Oregon, Rodeo and got some stuff that Eastman is still selling for five dollars a foot.

Young Blakely scooped the country once, too. It was on the occasion of the first non-stop flight from Moscow to Los Angeles. But something went amiss, and the Russian fliers radioed to the Army Barracks at Vancouver that they would have to land. A medical officer, friend to the family was stationed at the Barracks and he called Gene on the phone to tell him the news. When the Russians landed at 3 a.m. a lone cameraman photographed that historic event. Later, other photographers arrived, but all they got was shots of the fliers on the ground, and the plane ditto. The kid made his first chunk of dough on that deal—$300.

Attending Vogue School of Commercial Art in Chicago and studying advertising layout, etc., did not dampen his interest in photography, either. Instead, when he went back to Oregon and set up his own business in Portland, one of the first things he did was to convince a couple of clients that what they needed was commercial motion pictures. They did, and Blakely was in a new business—Commercial Production.

Gene believes there's only one way to get things done—do them. It's a rule he follows, and it seems to work, for he is now on the verge of becoming a successful producer of something new in cartoons. And he's done it alone and on his own. The whole business!

How does he ever get any work done with cars coming in and going out all day long? Easy! "When I want to work and not be bothered," he grinned, "I just run up the fifty cent sign. That does it!"

Leaving the tiniest studio in Hollywood, I glanced back. The fifty cent sign was up! Blakely was probably going into production again!

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In addition to these economic units, the various physical environments under which men live are covered by appropriate films. This regional presentation of geography, divorced from political boundaries, has proven especially effective in this day of rapidly changing political units Hence in this Story of Civilization there are separate units on Jungle People, Desert People, Arctic People, Forest People and the like

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For many years teachers in public schools have made much use of activity projects and tours whereby the entire class "took time off" to visit mills, mines, power plants and such other important projects as were readily accessible. Today educators are recognizing that sound motion pictures can present the same subject matter, together with many other subjects not so readily accessible, accompanied by voice commentary, with greater richness of material and accuracy than was possible through the verbal comments and field observations of the old activity tours.

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